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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/624,876 | 07/22/2003 | Jeffrey W. Liebert | 4090-152 | 6796 |

7590 09/07/2006

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EXAMINER

MILLER, CARL STUART

ART UNIT PAPER NUMBER

3747

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/624,876 | Applicant(s) LIEBERT, JEFFREY W. | |
| | Examiner Carl S. Miller | Art Unit 3747 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 and 27-55 is/are allowed.
- 6) ☒ Claim(s) 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Zurfluh and Bock ('481).

Martin teaches applicant's basic structure in that the reference shows a spacer (22) sandwiched between a head gasket and a lower metallic gasket (20). The Martin spacer does not have the boss portion of the claims. Martin further teaches that replacement of the inserts is possible, thereby making the applicant's replacement method claims (30+) obvious as well.

Bock teaches the use of a spacer (64) with a boss portion similar to the applicant's plate member. Bock's spacer channels coolant along the side of the cylinder liner and thus acts to carry heat away from the liner.

Zurfluh, at Figure 1, teaches a metallic gasket which includes holes for coolant flow that surround the cylinders and additional holes (24) for mounting bolts.

It would have been obvious to modify Martin by making the spacer element as taught by Bock (to include a boss portion) and to make the face of the gasket as taught by Zurfluh because Bock taught the heat dissipation advantages of his spacer structure and Zurfluh simply illustrated the need to make any spacer or gasket with orifices for coolant flow and head mounting bolts.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin, Zurfluh and Bock as applied to claim 1 above, and further in view of Ford and Ishida.

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Ford teaches constructing a cylinder liner of low carbon ductile steel and since steel is made from iron, such a liner would have conductivity levels similar to an iron liner and make such a liner obvious.

Ishida teaches a gasket made of aluminum and such a gasket would have a higher thermal conductivity than the liner of Ford.

It would have been obvious to modify Martin as above and to use the materials taught by Ford and Ishida for the liner and plate/spacer, respectively, because these materials were commonly used for these elements.

Claims 1-22 and 27-55 are allowed.


Applicant's arguments filed 8/23/06 have been fully considered but they are not persuasive. In particular, applicant's arguments with regard to the claims that require a boss member or the equivalent thereof be part of the plate member and support the outer surface of the liner have been found convincing and these claims have now been allowed. Claims 23-26 however do not include these limitations and are thus still rejected under the previous grounds of rejection. For example, any plate that in any way would limit lateral deformation of the sleeve would make obvious this limitation in Claim 23.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl S. Miller whose telephone number is 571-272-4849. The examiner can normally be reached on MTWTHF.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Cronin, can be reached at 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carl S. Miller
Primary Examiner